MA0007

#### Flood Control Project Maintenance Levee Inspections

## Maintenance Issue Types Only, Levee Inspection Report By Mile - Spring 2018

\*\* SBFCA currently has operation and maintenance obligations during project construction and closeout.

## **Sutter Maintenance Yard Maintenance Area 0007**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Feather River	Right	11.90	03/20/2018 03/20/2018	Sterling York

LM Start		Rating **	Α	Issue No.		1	
LM End		Issue Type +	Ma	Location *			
Category	Earthen L	evee		GPS La	atitud	le/Longitude	
Calegory				Start		End	
Item	Operation	nce		٥		0	
пеш	Manuals				٥		0
DWR ID	DWR_MA0	007_01_s _ 201	3_1				
		Comn	nent Cod	le			
		Inspect	or Comm	nent			
There are new O&M manualsgiven to the LMA now that construction is complete. The O&M manuals are located at the Sutter Maintenance Yard.							

No Photos

Rating \*\* Issue No. Α 3 LM Start Issue Type + LM End Ma Location \* Earthen Levee GPS Latitude/Longitude Category Start End **Emergency Supplies &** Equipment DWR ID DWR\_MA0007\_01\_s \_ 2013\_3 Comment Code

Inspector Comment

No Photos

Emergency supplies and equipment are stored at the Sutter Maintenance Yard.

N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain

## Maintenance Issue Types Only, Levee Inspection Report By Mile - Spring 2018

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## **Sutter Maintenance Yard Maintenance Area 0007**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Feather River	Right	11.90	03/20/2018 03/20/2018	Sterling York

LM Start		Rating **	Α	Issue No.		4	
LM End		Issue Type +	Ma	Location *			
Category	Earthen L	evee		GPS La	atituc	de/Longitude	
Category				Start		End	
Item	Flood Pre	paredness &	Training		0		0
пеш					0		0
DWR ID	DWR_MA0	007_01_s _ 201	13_4				
		Comn	nent Coc	le			
	Inspector Comment						
	Sutter Maintenance Yard employees attend the annual Flood Fight class put on by DWR.						

No Photos

LM Start	0.00	Rating **	Α	Issue No.		12
LM End	11.88	Issue Type +	Ma	Location *		LS
Category Earthen Levee				GPS La	atitud	e/Longitude
				Start		End
Item	Vegetatio	n		39.3100	97°	39.439682°
пеш				-121.6378	94°	-121.641718°
DWR ID DWR_MA0007_01_s _ 2018_12						
Comment Code						

V1: Control annual grass and weeds on the levee slopes and easements.

## Inspector Comment

The annual vegetation is well maintained, Spring 2018.

## Photo 1 of 3: SP\_2018\_MA0007\_200\_12\_20180402\_00031.jpg



View looking upstream landside near Levee Mile 0.0 of the well maintained annual vegetation, Spring 2018.

## Maintenance Issue Types Only, Levee Inspection Report By Mile - Spring 2018

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## **Sutter Maintenance Yard Maintenance Area 0007**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Feather River	Right	11.90	03/20/2018 03/20/2018	Sterling York

LM Start	0.00	Rating **	Α	Issue No.		12 (cont)	
LM End	11.88	Issue Type +	Ма	Location *		LS	
Category	evee	GPS La	atitud	le/Longitude			
Calegory				Start		End	
Item	97°	39.439682 °					
item		-121.641718°					
DWR ID DWR_MA0007_01_s _ 2018_12							
		Comn	nent Cod	le			
V1 : Contro easements	•	grass and wee	ds on th	e levee slo	pes	and	
		Inspecto	or Comm	nent			
The annua	l vegetatio	n is well main	tained, S	Spring 2018	3.		

LM Start	0.00	Rating **	Α	Issue No.	12 (cont)
LM End	11.88	Issue Type +	Ма	Location *	LS



View looking upstream landside near Levee Mile 7.5 of the well maintained annual vegetation, Spring 2018.

#### Photo 3 of 3: SP\_2018\_MA0007\_200\_12\_20180402\_00032.jpg



View looking upstream landside near Levee Mile 11.36 of the well maintained annual vegetation, Spring 2018.

N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain + Issue Type
Ma : Maintenance Deficiancy

Ob : Design & System Obsolescence En : Enforcement

Page 3 of 12

## Maintenance Issue Types Only, Levee Inspection Report By Mile - Spring 2018

\*\* SBFCA currently has operation and maintenance obligations during project construction and closeout.

## **Sutter Maintenance Yard Maintenance Area 0007**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Feather River	Right	11.90	03/20/2018 03/20/2018	Sterling York

LM Start	0.00	Rating **	Α	Issue No.		13	
LM End	11.88	Issue Type +	Ма	Location *		WS	
Category	evee	GPS La	atitud	le/Longitude			
Calegory				Start		End	
Item	Vegetatio	n		39.3100	97°	39.439682 °	
пеш				-121.6378	94°	-121.641718 °	
DWR ID DWR_MA0007_01_s _ 2018_13							
		Comn	nent Cod	le			
V1 : Contro easements		grass and wee	ds on th	e levee slo	pes	and	
		Inspecto	or Comm	nent			
The annua	The annual vegetation is well maintained, Spring 2018.						

LM Start	0.00	Rating **	Α	Issue No.	13 (cont)
LM End	11.88	Issue Type +	Ma	Location *	WS



View looking upstream landside near Levee Mile 0.0 of the well maintained annual vegetation, Spring 2018.

## Photo 2 of 3: SP\_2018\_MA0007\_200\_13\_20180402\_00034.jpg



View looking upstream landside near Levee Mile 7.5 of the well maintained annual vegetation, Spring 2018.

## Maintenance Issue Types Only, Levee Inspection Report By Mile - Spring 2018

\*\* SBFCA currently has operation and maintenance obligations during project construction and closeout.

## **Sutter Maintenance Yard Maintenance Area 0007**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Feather River	Right	11.90	03/20/2018 03/20/2018	Sterling York

LM Start	0.00	Rating **	Α	Issue No.		13 (cont)	
LM End	11.88	Issue Type +	Ма	Location *	WS		
Category	Earthen L	evee		GPS La	atitud	le/Longitude	
Calegory				Start		End	
Item	Vegetatio	n		39.3100	97°	39.439682 °	
item				-121.6378	94°	-121.641718 °	
DWR ID DWR_MA0007_01_s _ 2018_13							
		Comn	nent Cod	le			
V1 : Contre		grass and wee	ds on th	e levee slop	pes	and	
		Inspecto	or Comm	nent			
The annual vegetation is well maintained, Spring 2018.							



View looking upstream landside near Levee Mile 11.47 of the well maintained annual vegetation, Spring 2018.

LM Start	0.01	Rating **	С	Issue No.	e No. 11		
LM End	1.72	Issue Type +	Ma	Location *	WS		
Category Earthen Levee				GPS Latitude/Longitude			
Calegory		Start		End			
Item	Vegetation			39.31114	47 °	39.334327 °	
пеш				-121.6376 <sup>-</sup>	13 °	-121.634060 °	
DWR ID DWR_MA0007_01_f _ 2017_11						·	
Comment Code							

Comment Code

V1 : Control annual grass and weeds on the levee slopes and easements.

#### Inspector Comment

The tall grasses and weeds have been removed from this section of levee along the landside slope which parallel the ditch, Spring 2018.

No Photos

## Maintenance Issue Types Only, Levee Inspection Report By Mile - Spring 2018

\*\* SBFCA currently has operation and maintenance obligations during project construction and closeout.

## **Sutter Maintenance Yard Maintenance Area 0007**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Feather River	Right	11.90	03/20/2018 03/20/2018	Sterling York

LM Start	0.31	Rating **	N	Issue No.		69	
LM End	0.37	Issue Type +	Ма	Location *	WS		
Earthen Levee			GPS Latitude/Longitude				
Category				Start		End	
Item	Trim / Thi	n Trees		39.3149	91°	39.315693 °	
пеш			-121.6350	38°	-121.634459 °		
DWR ID DWR_MA0007_01_s _ 2016_69							
	Comment Code						
T5 : Tree s	stumps.						
			0				
		Inspecto	or Comm	nent			
Several tree stumps at levee toe still exist Fall 2017.							



View looking downstream of several tree stumps at the levee toe on the waterside, still exist Fall 2017.

LM Start	0.44	Rating **	С	Issue No.		72		
LM End	0.44	Issue Type +	Ma	Location *	LS			
Category	Earthen L	evee		GPS La	atituc	le/Longitude		
Calegory				Start		End		
Item	Trim / Thi	n Trees		39.3165	27°	39.316527°		
пеш				-121.6338	00°	-121.633800 °		
DWR ID	DWR ID DWR_MA0007_01_f _ 2016_72							
		Comn	nent Cod	le				
T5 : Tree s	stumps.							
Inspector Comment								
The decomposing stump has been removed, Spring 2018.								

No Photos

## Maintenance Issue Types Only, Levee Inspection Report By Mile - Spring 2018

\*\* SBFCA currently has operation and maintenance obligations during project construction and closeout.

## **Sutter Maintenance Yard Maintenance Area 0007**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Feather River	Right	11.90	03/20/2018 03/20/2018	Sterling York

LM Start	0.92	Rating **	A/W	Issue No.		67
LM End	0.92	Issue Type +	Ma	Location *	LS	
Category Earthen Levee				GPS Latitude/Longitude		
Calegory				Start		End
Item	Vegetatio	n		39.32311	8 °	39.323118°
пеш				-121.63220	5 °	-121.632205 °
DWR ID DWR_MA0007_01_s _ 2016_67						

#### Comment Code

V2: Remove the wild growth other than native grasses from the levee slopes.

#### Inspector Comment

The black berry bushes are continued to be sprayed and maintained at the levee toe, Fall 2017.

# Photo 1 of 1: SP\_2018\_MA0007\_200\_67\_20180302\_00010.jpg



View of landside toe vegetation looking downstream.

LM Start	1.55	Rating **	A/W	Issue No.		2			
LM End	1.71	Issue Type +	Ma	Location *		WS			
Category	ental	GPS Latitude/Longitude							
Calegory	<del>g</del> gory —					End			
Item	2015 USA	39.3320	00°	39.334240°					
пеш	DRAFT		-121.6331	78 °	-121.633908°				
DWR ID DWR_MA0007_01_s _ 2016_2									
	Comment Code								

## Comment Code

#### Inspector Comment

2011 - The toe of the levee has been excavated by the land owner. Small holes throughout the site have been filled with a plaster like substance. Large canal on landside slope and over the levee toe. 2015: Site is part of the extended inventory, last inspected 2011. [2015] Site ID: FHR\_47-5\_R]

No Photos

## Maintenance Issue Types Only, Levee Inspection Report By Mile - Spring 2018

\*\* SBFCA currently has operation and maintenance obligations during project construction and closeout.

## **Sutter Maintenance Yard Maintenance Area 0007**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Feather River	Right	11.90	03/20/2018 03/20/2018	Sterling York

LM Start	1.76	Rating **	М	Issue No.	76		
LM End	1.76	Issue Type +	Ma	Location *			
Category				GPS Latitude/Longitude			
Calegory	gory					End	
Item	DWR UC	IP LMA Respo	onsibility	39.3348	68°	39.334868	
item			-121.6337	73 °	-121.633773 °		
DWR ID							
Comment Code							

#### Inspector Comment

FS\_ID:52390 DS\_ID:16926 EP\_NO: N/A

Repair Type: Non-Urgent Crossing Status: Found

UCIP Comments: 08/09/2017 Dual 60-inch pipes are still present--no modifications appear to have been made to this structure. No permit or owner has been identified. Need to contact owner to notify of safety issue regarding the missing covers for CMP riser. (DWR UCIP - O. Magana)08/02/2017 After reviewing record drawings it appears this crossing has remained. Project Improvements begin at Station (Sta) 1765+00 (MA0007 about LM 1.73) to Sta 2303+50 (ST0005 about LM 1.23), refer to record drawings for the Feather River West Levee Improvement Plans Station 1765+00 to 2368+26, Project D details. MA0007 project details include NO CUTOFF WALL from Sta 1765+00 (MA0007 about LM 1.73) to 1815+00 (MA0007 about LM 2.64) and LEVEE DEGRADE AND RECONSTRUCTION WITH CUT OFF WALL from Sta 1817+00 (MA0007 about LM 2.69) to Sta 2289+00, Sta 2287+00 to Sta 2290+00 (MA0007 about LM 11.60). (DWR UCIP - O. Magana)

5/16/2016 Feather River West Levee Improvement Project--Levee currently under construction.6/10/2015 Debris still present in risers and pipes were not replaced with the SBFCA project.12/29/2014 Same as last inspection.5/19/2014 Same as last inspection.5/19/2013 SBFCA project recommends replacing in accordance with title 23.5/7/2013 Same debris issue as last inspection. Recommend repairing top cover to prevent falls. Wheel to open gate chained and locked so could not verify gate operation.10/31/2012 Debris inside riser could prevent slide gate from closing. This crossing was listed in the USACE Periodic Inspections as ID# USACE\_CESPK\_MA07\_2010\_a\_0060 however, no issues noted.

FIELD\_STRUCT\_DESC: 1 of 2: 60-inch corrugated metal gravity drainage pipe through the levee, 12.5 feet below the crown. Slide gate in a 78-inch corrugated metal pipe (CMP) well on the waterside (WS) slope. Concrete bulkheads on both ends. Reinforced concrete spillway on the WS end. (Existing 60-inch corrugated metal gravity drainage pipe crossing remained during the Feather River West Levee Improvements, Project D). [Additional Reference(s): DWR Levee Log, 2005. USACE Sacramento O&M Manual 152, March 1957 (Station 1+90). Sutter Butte Flood Control Agency (SBFCA) Feather River West Levee Project, Volume 4 of 6 (Project D) Feather River West Levee Improvement Plans Sta 1765+00 to 2368+26, 2016, Volume 4-SBFCA\_Record\_Drawings\_Project D\_2017.05.16.pdf, Drawing No. C-101].

Photo 1 of 3: UCIP\_SP\_2018\_52390\_77346.jpg



Overview of levee crown looking upstream towards crossings.

## Maintenance Issue Types Only, Levee Inspection Report By Mile - Spring 2018

\*\* SBFCA currently has operation and maintenance obligations during project construction and closeout.

## **Sutter Maintenance Yard Maintenance Area 0007**

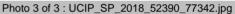
Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Feather River	Right	11.90	03/20/2018 03/20/2018	Sterling York

LM Start	1.76	Rating **	М	Issue No.	76 (cont)
LM End	1.76	Issue Type +	Ma	Location *	



LS view: concrete headwall with dual 60-inch crossings visible from LS.

LM Start	1.76	Rating **	М	Issue No.	76 (cont)
LM End	1.76	Issue Type +	Ма	Location *	





LS view: view of canal looking west from crossing.

N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain

## Maintenance Issue Types Only, Levee Inspection Report By Mile - Spring 2018

\*\* SBFCA currently has operation and maintenance obligations during project construction and closeout.

## **Sutter Maintenance Yard Maintenance Area 0007**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Feather River	Right	11.90	03/20/2018 03/20/2018	Sterling York

LM Start	1.76	Rating **	М	Issue No.		77	
LM End	1.76	Issue Type +	Ма	Location *			
Category				GPS Latitude/Longitude			
Calegory			Start		End		
Item DWR UCIP LMA Responsibility				39.33488	6°	39.334886 °	
				-121.63378	3°	-121.633783 °	
DWR ID							
Comment Code							

#### Inspector Comment

FS\_ID:52389 DS\_ID:17011 EP\_NO: N/A

Repair Type: Non-Urgent Crossing Status: Found

UCIP Comments: 08/09/2017 Dual 60-inch pipes are still present--no modifications appear to have been made to this structure. No permit or owner has been identified. Need to contact owner to notify of safety issue regarding the missing covers for CMP riser. (DWR UCIP - O. Magana)08/02/2017 After reviewing record drawings it appears this crossing has remained. Project Improvements begin at Station (Sta) 1765+00 (MA0007 about LM 1.73) to Sta 2303+50 (ST0005 about LM 1.23), refer to record drawings for the Feather River West Levee Improvement Plans Station 1765+00 to 2368+26, Project D details. MA0007 project details include NO CUTOFF WALL from Sta 1765+00 (MA0007 about LM 1.73) to 1815+00 (MA0007 about LM 2.64) and LEVEE DEGRADE AND RECONSTRUCTION WITH CUT OFF WALL from Sta 1817+00 (MA0007 about LM 2.69) to Sta 2289+00, Sta 2287+00 to Sta 2290+00 (MA0007 about LM 11.60). (DWR UCIP - O. Magana)

5/16/2016 Feather River West Levee Improvement Project--Levee currently under construction.6/10/2015 Debris still present inside riser and pipe was not replaced with the SBFCA project.12/29/2014 Same as last inspection.5/19/2014 Same as last inspection.5/13/2013 SBFCA project recommends replacing in accordance with title 23.5/7/2013 Same as last inspection. Recommend costructing cover to pevent falls. Wheel to operate gate chained and locked so gate operation could not be verified.10/31/2012 no cover; debris inside riser could prevent slide gate from closing. This crossing was listed in the USACE Periodic Inspections as ID# USACE\_CESPK\_MA07\_2010\_a\_0060 however, no issues noted.

FIELD\_STRUCT\_DESC: 2 of 2: 60-inch corrugated metal gravity drainage pipe through the levee, 12.5 feet below the crown. Slide gate in a 78-inch corrugated metal pipe (CMP) well on the waterside (WS) slope. Concrete bulkheads on both ends. Reinforced concrete spillway on the WS end. (Existing 60-inch corrugated metal gravity drainage pipe crossing remained during the Feather River West Levee Improvements, Project D). [Additional Reference(s): DWR Levee Log, 2005. USACE Sacramento O&M Manual 152, March 1957 (Station 1+90). Sutter Butte Flood Control Agency (SBFCA) Feather River West Levee Project, Volume 4 of 6 (Project D) Feather River West Levee Improvement Plans Sta 1765+00 to 2368+26, 2016, Volume 4-SBFCA\_Record\_Drawings\_Project D\_2017.05.16.pdf, Drawing No. C-101].

FS Date: 8/9/2017



Overview of levee crown looking upstream towards crossings.

* Location	** Rating		+ Issue Type
LS : Land Side N/A : Not Applicable	A : Acceptable	N : Not Inspected/Rated	Ma : Maintenance Deficiancy
WS: Water Side	M : Minimally Acceptable	C : Corrected	Ob : Design & System Obsolescence
CR : Crown	U : Unacceptable	A/W : Acceptable but Monitor & Maintain	En : Enforcement

## Maintenance Issue Types Only, Levee Inspection Report By Mile - Spring 2018

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## **Sutter Maintenance Yard Maintenance Area 0007**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Feather River	Right	11.90	03/20/2018 03/20/2018	Sterling York

LM Start	1.76	Rating **	М	Issue No.	77 (cont)
LM End	1.76	Issue Type +	Ma	Location *	



LS view: concrete headwall with dual 60-inch crossings.

LM Start	1.76	Rating **	М	Issue No.	77 (cont)
LM End	1.76	Issue Type +	Ma	Location *	

### Photo 3 of 3: UCIP\_SP\_2018\_52389\_77358.jpg



LS view: canal located on LS, photo taken from levee crown looking west.

N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain

## Maintenance Issue Types Only, Levee Inspection Report By Mile - Spring 2018

\*\* SBFCA currently has operation and maintenance obligations during project construction and closeout.

## **Sutter Maintenance Yard Maintenance Area 0007**

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Feather River	Right	11.90	03/20/2018 03/20/2018	Sterling York

LM Start	4.39	Rating **	С	Issue No.	6			
LM End	4.46	Issue Type +	Ma	Location *	WS			
Supplemental				GPS L	atitud	e/Longitude		
Category				Start		End		
Item		ACE Erosion Survey,		39.366726°		39.367606°		
пеш	DRAFT		-121.647217 °		-121.647866 °			
DWR ID	DWR_MAG	007_01_s _ 201	6_6					
		Comn	nent Cod	de				
Inspector Comment								
2012 - Oversteepened slope with failing rock (from repair completed in								

1954). Likely slope stability issues. 2015: Site is part of the extended

inventory, last inspected 2011. [2015 Site ID: FHR\_50-9\_R]

No Photos

\* Rating

A: Acceptable

M: Minimally Acceptable

U: Unacceptable

N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain